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On the Meteor of May 18, 1838, and on Shooting Stars in general; by Elias Loomis, Professor of Mathematics and Natural Philosophy in Western Reserve College, Ohio.

On the evening of May 18, 1838, a very remarkable meteor was seen throughout most of the northern part of the United States, and a considerable district of Upper Canada. It attracted general attention from its size, brilliancy, train, length of path, and slowness of apparent motion. Observers, almost without exception, pronounced it the most remarkable meteor they ever saw. Having obtained observations at four or five different places, and learned the general phenomena of the meteor, I inserted a brief notice of it in the Cleveland papers, and concluded with requesting information from any one who observed it. Above twenty letters were received in answer to this invitation; and as considerable information has been obtained through other channels, the observations are as numerous as could be desired. Their accuracy will be considered hereafter. The result is, that the meteor was noticed throughout all the north of Ohio; at Detroit and Ann Arbor, in Michigan; at various places in the state of New York; at two stations in New Hampshire; and in various parts of Canada. The evidence that all saw the *same* meteor is as follows: 1. All saw a meteor at the same instant. Throughout Ohio, the time was that of early candle-lighting. The brightest stars were just becoming visible. In New Hampshire, the time was a little after eight o'clock. The phenomenon, as near as can be ascertained, appeared every where at the same absolute instant. 2. The meteor was every where seen in the same place. Not in the same direction as referred to the points of the compass, but occupying the same absolute position as referred to the earth's surface. That is, the appearances are perfectly explained by supposing a single meteor of great size, elevated about thirty miles above the earth's surface, to have described a nearly horizontal path of more than two hundred miles. Such a supposition will satisfy all the observations within the limits of the unavoidable errors of observation. 3. The meteor was every where of remarkable size. It was of such splendour as is very seldom seen. 4. It exhibited a train, besides several peculiarities so extraordinary, as to identify it without danger of mistake. It broke into several fragments which fell behind the main body and followed at some interval. This will be considered more fully hereafter. These four facts combined, prove conclusively that it was indeed the *same* meteor seen by the different observers. The evidence is the same in kind, and well nigh the same in degree, as that which assures us that it is one moon which is seen in the northern and southern hemispheres. Assuming, then, that all the observations were made upon a single object, I proceed to determine as accurately as possible the height and course of the meteor. At Hanover, N. H., the meteor was observed by Professor Hubbard. When first noticed, it bore S. 80° W., elevated above the horizon 9° 38′; it disappeared N. 69° W., at an elevation of 3° 24′. These numbers were obtained by measurement from the remembered position of the meteor, and were communicated to me by Professor Young. At Clinton, in New York, the meteor was observed by Professor Catlin, of Hamilton College. It first appeared S. 13° 25′ W., elevated 4° 30′; it disappeared N. 67° W., elevated 8°. At an intermediate point it bore N. 87° 30′ W., elevated 12° 36′. At Buffalo, N. Y., the meteor was observed by Mr. R. W. Haskins. He first saw it a little south of east, and it disappeared a little east of north. Its greatest altitude was 27°. At Hudson, Ohio, the meteor was observed by Professor Barrows. It was first seen N. 83° E., elevated 7°; and disappeared N. 35° E., elevated 6°. In Aurora, a town adjoining Hudson, the meteor was observed by Mr. E. Brown. He first saw it due east, elevated about 8°; and it disappeared N. 30° E., elevated 8°. At Ann Arbor, Michigan, the meteor was seen by Messrs. J. and L. Chandler, to move nearly parallel with the horizon, at an elevation of three degrees, according to one, and of four degrees, according to the other. It was seen in the N. E. quarter, but the precise direction could not be given, as the estimate was made when they had no opportunity of returning to the spot of observation. The preceding observations are the most precise of any I have been able to obtain. They were all made by the aid of instruments, and the chief error therefore to be apprehended, is that arising from the difficulty of exactly remembering the apparent position of the meteor. It is believed, however, that in the above observations this error is small. In this first comparison, I neglect entirely such observations as give mere *estimates* of elevation by the eye; for it is a remarkable fact, that almost every one over-estimates angular elevation near the horizon. I have made the computation from the above data, and find the perpendicular elevation of beginning 28.5 miles. The place where it then stood in the zenith was in Lycoming county, Penn., lat. 41° 16′, long. 1° west from Washington. At its explosion, its height was 32.1 miles, and the place where it then stood in the zenith was in Upper Canada, lat. 44° 7′, long. 2° west. At an intermediate point, its height was 34.8 miles, and it was then vertical over Monroe county, N. Y., lat. 43° 0′, long. 0° 46′ west. The length of path then was 218 miles, and its mean course N. 13½° W., passing vertically over Rochester in the state of New York. In this computation I have aimed to make the positive equal to the negative errors, and the sum of the errors, disregarding their signs, a minimum. The beginning, as I have here assigned it, rests upon the observations at Clinton, Hudson, and Aurora. It appears not to have been seen so early in its course either at Hanover, Buffalo, or Ann Arbor. The middle point of its path, near Rochester, appears to have been observed at all the stations. The observations at Hudson and Aurora, having been made near each other, I consider as one observation, and take their mean. It is impossible perfectly to satisfy the observations. The result I have above given makes the errors of the observation as follows: Hanover + 3° 45′; Clinton − 2° 54′; Buffalo − 2′; Hudson − 5′; Ann Arbor − 44′. The positive are equal to the negative errors, and I am unable to assign the meteor a position which shall diminish the sum of the errors. The errors at Buffalo, Hudson, and Ann Arbor, are quite within the limits of the unavoidable errors of such observations. Those at Hanover and Clinton seem somewhat large, yet when it is remembered that these measurements were not taken till more than a month after the meteor appeared, I think we must admit the possibility of errors of this magnitude. The assigned termination of the meteor's flight, rests upon the observations of Hanover, Clinton, Hudson, and Ann Arbor. The errors of the observations appear to be, Hanover + 27′; Clinton + 2′; Hudson + 54′; Ann Arbor − 1° 24′; all of which are quite admissible.

The observations at Clinton make the meteor's first appearance S. 13° 25′ W. I think it probable there is some mistake here, or if not, we must suppose the meteor to have been seen at Clinton much earlier than at any other station. At all events, it is impossible with this single observation to trace the

meteor with confidence farther south than I have done.

It will be observed, that the three points in the meteor's path which I have above given, do not lie in a straight line. The middle point is more distant from the surface of the earth than either of the extremes by 2.7 miles, and allowing for the convexity of the earth, the total curvature in a vertical plane is about six miles. But the projection of the meteor's path upon a horizontal plane, deviates still more from a straight line. The curvature here amounts to forty-one miles, the convexity being turned towards the east. We may suppose a part of this irregularity to arise from the errors of the observations, yet I think it well nigh certain that the path was actually crooked.

Having thus deduced the meteor's path from the best observations, I proceed to enquire how these results accord with the remaining observations. A meteor was seen at Raymond, in the eastern part of New Hampshire, a little past eight o'clock, on the evening of the 18th. It bore nearly west, at an elevation of from 5 to 10°, moved north westerly, descending rapidly towards the horizon. This description accords as nearly as could be expected with the position I have assigned the meteor. At Mount Upton, Chenango county, N. Y., "soon after sunset, on the evening of the 18th, a very brilliant meteor started from that part of the heavens which declines a little to the west or southwest from the point over head, and pursued its course about due N. W., disappearing behind the hills in that direction." According to my results, the meteor could not have been elevated much above fifteen degrees at this place, and if this observation were to be implicitly relied upon, we must infer that the meteor was higher than I have supposed, or that its path was farther to the east than I have assigned it. The language of the observation, however, is very vague, and I think it highly probable that the observer never saw the meteor so high as his language would naturally imply, but inferred from its final direction that it must have originated in that quarter. At Carroll, Chautauque county, N. Y., a meteor was seen about dusk on the evening of the 18th. It appeared first in the east, elevated 25 or 30 degrees above the horizon, and disappeared in the north perhaps about 5° above the horizon. All this accords sufficiently well with my results. In one of the Canadian papers, the meteor is noticed as having been seen in various places, but the observations are too vague to be of the least value. I have received a vast number of observations from the counties of Ashtabula, Trumbull, Geauga, Portage, Cuyahoga, and Huron, all in the north eastern part of Ohio. The observations agree about as well as could be expected, if they had all been made from precisely the same station, with the exception that the most eastern observations assign the meteor somewhat the greatest altitude. The altitudes are almost without exception given too great, and commonly twice too great. The great variety of observations made in the vicinity of Hudson, although somewhat loose, must satisfy any one that the meteor was very distant, and at a considerable elevation. No one can believe that a hundred different meteors, all of them of the most extraordinary kind, and characterised by the very same peculiarities, should appear at the same absolute instant, within a limited district, and all moving in such directions, and exhibiting such appearances as would be presented by one large, remote, and elevated meteor, while only a single meteor appeared to any one of the numerous observers. The case seems too plain for further argument.

I have now, as appears to me, assigned such a position to the meteor as reconciles all the observations within the limits of unavoidable error. This determination is liable to some uncertainty; yet I believe the uncertainty is not so great as materially to affect any theoretical conclusions to be deduced.

Let us now enquire for the velocity of the meteor, as referred to the earth's surface. The length of path seen at Hanover was 201 miles. The time of observation was estimated at eleven seconds. This estimate is probably too great, yet it gives the velocity of the meteor 18 miles per second. At Clinton, the path observed was at least 218 miles, and the time was estimated at five seconds, making a velocity of 43 miles per second. The path observed at Buffalo was probably 112 miles, and the time was estimated from 4 to 5 seconds, which gives a velocity of 25 miles per second. At Hudson and Aurora, the path seen was about 218 miles, and the time estimated from 6 to 7 seconds, giving a velocity of 33 miles per second. These are the observations I think most to be relied upon; and the average velocity resulting from them, is 30 miles per second.

Let us now form some estimate of the magnitude of the meteor. Its diameter at Hanover was estimated at one fourth that of the moon, and its least distance was 281 miles. Its absolute diameter then was .65 mile. At Clinton, the meteor appeared very much elongated in the horizontal direction, and was followed by two smaller portions at intervals of less than a degree each. The breadth of the head was estimated at eight minutes, and its distance was 118 miles, which makes the absolute breadth .27 mile. The length of the principal portion was about one degree, that is, nearly two miles. The two smaller portions which followed in the rear, were about a tenth of a mile in diameter. At Buffalo, also, the meteor appeared elongated, its horizontal diameter being four or five times the vertical. Its least diameter was estimated at half that of the moon, and its distance being about 66 miles, its absolute breadth must have been .29 mile. Its length was four or five times this amount. At Hudson, its diameter was estimated at one third that of the moon, and being distant 226 miles, it absolute diameter was .66 mile. The observations made in other places agree substantially with the above, and from them we may infer, that the absolute diameter of the meteor was about three quarters of a mile. At the more distant stations, the meteor appeared nearly circular, but from the nearest points of observation, it appeared decidedly elongated. Almost all the observers noticed a falling off of various portions from the main body, which, lagging behind, formed a species of train. Several of these smaller portions formed a considerable fraction, perhaps one tenth part, of the main body itself.

This meteor must have consisted of matter exceedingly rare, and of very feeble cohesion. During nearly its entire route, new portions of matter were continually detaching themselves from the main body, and this finally divided into a large number of fragments. We have, perhaps, no means of forming any precise estimate of its density, yet it is doubtful whether it exceeded that of atmospheric air. The light was, without doubt, produced by combustion. The meteor, by rapid motion through the upper regions of the air, generated heat sufficient to set itself on fire, and it was probably entirely consumed in the space of ten seconds. Nothing is learned to have fallen to the earth from the meteor, as would probably have been the case if its density had not been exceedingly feeble. Moreover, the appearances were those of a body entirely consumed by combustion. But a body, three quarters of a mile in diameter, entirely consumed in ten seconds, must be supposed exceedingly combustible and of very feeble density.

One of the points respecting which I solicited information, in my communication through the Cleveland papers, was, whether any noise attended the meteor. To this question most observers replied decidedly in the negative. Two persons only represent that they heard a noise. One observer in Ohio states, that his attention was attracted by the light, and a whizzing noise resembling the burning of a slow match of powder; and an observer in the State of New York states the same fact. Now it would be altogether superfluous to give reasons for doubting the fact as thus stated, yet it is demonstrable that if such a noise was heard, it did not proceed from the meteor. At its nearest approach, the meteor was one hundred and sixty-two miles distant from the first observer, and seventy-six miles from the second. At the latter place, then, supposing, for simplicity, sound to travel at the same rate in rarefied as in dense air, the sound, if any, should have been heard about six minutes after the disappearance of the meteor, and at the former place more than twelve minutes. There was little opportunity therefore for one's attention to be attracted to the meteor by a whizzing noise proceeding from it. The noise alleged existed doubtless solely in the imagination. I by no means pronounce it impossible that sound may have come from the meteor; but if a report did follow, it would come after so long an interval, that few would think of attributing it to the meteor.

Let us now compare the direction of the meteor's path with that of the earth in its orbit. The point in space towards which the earth is moving is of course the ecliptic, and nearly 90° west of the sun. At the time in question, it was about eight o'clock in the evening where the meteor was vertical. The

point then towards which the earth's motion was directed, had passed by nearly two hours the inferior meridian. The line of direction was inclined to the horizon about 50°, and its azimuth was somewhat east of north. The meteor's course was nearly north and parallel with the horizon. Its velocity was thirty miles per second; that of the earth 19 miles. The directions of the earth and meteor were inclined to each other about 64°, and the meteor's velocity of 30 miles was its velocity relatively to the earth. It is then simply a mathematical question to determine what must have been the absolute direction and velocity of the meteor's motion, in order that, combined with the earth's motion, it may give the above resultant. The velocity I find to be about forty miles per second. A part of this velocity, less however than seven miles, was due to the earth's attraction. We must then admit that a small collection of exceedingly rare matter, revolving about the sun in an orbit which at one point coincided nearly with that of the earth, but moving with about double the velocity, plunged into the earth's atmosphere, took fire, and exhibited the splendid phenomenon of May 18. That no portion of this body escaped from the earth's atmosphere and continued its solitary route, we cannot positively affirm; although the appearances seem to favour the supposition that the body was quite consumed in our atmosphere.

For the curvature of the meteor's path we can perhaps give only a hypothetical explanation. When a ball is moving with great velocity through the air, if one side be of such a form as to experience greater resistance than the opposite, it will be relatively retarded, and the path of the body will deviate towards that side. Now as it is highly improbable that the opposite sides of the meteor should be perfectly symmetrical, it might be expected to deviate more or less from a straight line. Moreover, the progress of the meteor was marked by combustion, which may be supposed to have been attended by a copious evolution of gas. Now if this gas should be evolved upon one side of the meteor more abundantly than on the other, it would become a moving force, which by reaction would cause the meteor to deviate to the opposite side. As these two causes appear to me highly probable, and adequate to account for the phenomenon, I think it superfluous to search for others. The earth's attraction would hardly produce the hundredth part of the deviation from a straight line observed in a vertical plane, and no part of that observed in a horizontal plane.

The meteor, whose phenomena I have thus attempted to analyze, although certainly very remarkable, was not unlike some others on record. In the London Philosophical Transactions for 1759, is an account of a meteor which appeared in Great Britain, Nov. 26, 1758. It moved in a direction N. W. by N., describing a path of about 400 miles. It shot obliquely downwards, being from 90 to 100 miles high at its origin, and from 26 to 32 at its termination. Its velocity was computed at 30 *miles per second*. Its diameter was estimated at certainly not less than half a mile, and probably greater. Its path deviated sensibly from a straight line, and a report, like a clap of thunder, was heard from it several minutes after the meteor disappeared. In the Philosophical Transactions for 1784, are several notices of a meteor seen in England, August 18, 1783. Its direction was nearly S. S. E. Its path was computed to have been at least 1000 miles in length, sensibly crooked, though nearly parallel with the surface of the earth, and elevated more than 50 miles. Its diameter was about half a mile, and velocity *not less than twenty miles per second*. A number of minutes after the meteor's disappearance, there was heard a rumbling noise like that of distant thunder. Both of these meteors broke into several fragments, which falling behind, formed a peculiar train. They appear to have been quite similar to the meteor of May 18th, and as the fact of a rumbling noise succeeding their appearance seems to be well attested in both cases, it is a little remarkable that nothing of the kind was noticed in the late meteor. It is doubtful, however, whether any observer watched long enough to be able to decide that no such report succeeded.

It may be useful to give here a summary of our knowledge respecting common shooting stars, that we may decide whether all these meteors are to be ranked in the same class. In the year 1798, Benzenberg and Brandes undertook in concert a series of observations on shooting stars near Gottingen, in Germany. They first took stations five and a half English miles from each other, at which they observed simultaneously several nights. After three nights' watching, finding their stations too near each other, they removed one of them to the distance of nine and a third English miles. On comparing their observations, they found twenty-two which had probably been seen at both stations, and of which they were able to compute the height for at least a part of the course. The sum of the heights of 17 meteors at their disappearance was 973 English miles. The sum of the heights of 4 meteors at their origin was 199 miles; sum of the lengths of their paths, 162 miles. In 1823, Brandes, being then professor at Breslau, resumed his observations in concert with a number of others, about twenty in all. The sum of the heights of 54 meteors at their disappearance was, according to these observations, 2761 miles. Sum of the heights of 45 meteors at origin, 2998 miles. Sum of 37 paths was 1619 miles.

In December, 1834, Mr. A. C. Twining and myself undertook a similar series of observations. We were not so successful as we expected to be; yet among the meteors observed, there were four whose paths we were able to compute. The sum of their heights at origin was 296 miles; at termination, 216 miles, and the sum of their paths, 142 miles. Finally, Mr. Twining has given for one meteor the height of origin 73 miles, of termination, 29.5 miles, length of path, 55 miles. We have then, as the result of all these observations, the sum of the heights of 76 meteors at termination, 3975 miles, being an average height of 52 English miles. The sum of the heights of 54 meteors at origin is 3566 miles, giving an average of 66 miles. The sum of the paths of 46 meteors is 1977 miles, being an average of 43 miles. The average velocity of 13 meteors whose duration was estimated with some care, is 22 miles per second, and the velocities range from 11 miles to 36 miles per second. The size of shooting stars is very various, yet it appears that not unfrequently they have a diameter of a hundred feet.

From the preceding statements I think it will appear that the meteor of May 18th did not differ essentially from the ordinary shooting stars, with the exception of its magnitude. It appeared at about the same height, moved with a velocity no greater than is known sometimes to belong to common shooting stars, and exhibited the usual phenomena of combustion. I see then no reason for separating this meteor from the class of ordinary shooting stars, any more than a large hailstone should be considered a phenomenon of a different kind from a small one. Shooting stars are well known to be celestial bodies, that is, to have an origin foreign from the earth; and it is no more strange that they should sometimes have a diameter of one mile, than that they should appear with a diameter of a hundred feet, or even of a single foot.

NEW INVENTED STEAM ENGINE.

At the British Alkali Works, Stoke Prior, near Bromsgrove, a steam engine has been invented by a labouring mechanic, and is daily in full operation, which will certainly supersede every other now in use, and that, too, in a very short period of time; as the simplicity of its construction, the smallness of its size, and the almost nothingness of its cost, will necessarily bring it speedily into notice among all persons whose business may require the aid of so useful an auxiliary. Its size is not more than twice that of a man's hat, and the expense of a five horse power will not exceed in cost half a score pounds. Its form is cylindrical, being about eighteen inches in diameter, and twenty-two deep. The steam is admitted through a hole in a hollow circular belt (attached to a wall), upon which it revolves, and works it by a diagonal action, against an upright piston, being forced out by pressure of a diagonal plate, which divides the interior into two portions. The rotary action is beautifully managed by means of a perfectly spherical steam-tight joint, at the end of a fixed inclined arm, towards which joint the upper and lower surfaces of the interior part of the cylinder are made to slope, after the form of an hour-glass. Upon these the diagonal plate performs its revolutions, such movement being permitted through an opening (from the circumference to the centre) equal in width to the thickness of the before mentioned upright piston, up and down the sides of which it continually works. To the centre of the bottom of the cylinder is fixed a shaft, having attached to it a wheel, which communicates the motion that may be required; and

this is all the machinery of which it consists!! When, therefore, we consider the saving of weight of metal, size, and expense, which will necessarily be gained by its adoption, and look at the incalculable advantages which such desiderata afford to steam navigation, our scientific friends, will not consider us too bold in asserting that this invention will speedily revolutionize the whole system in this department of mechanics. Patents have been procured from every European government, and from the American; and no secret is made at the Works in showing it to the public, either in action or in separate pieces, and in a model which is kept for the purpose.

American Christian Press Abroad.

From an article in the New York Observer, designated as above, we extract the following view of the printing department of foreign stations aided by the American Tract Society. It shows in a strong point of view the immense power of the press as a means of diffusing light and knowledge in the earth.

Macao, China, one press.

Singapore, two presses, and twelve block cutters; and six printers in Chinese. A printing office of brick, sixty-five feet by seventeen; a type foundery, and founts of type in Malay and Bugis, and a small one in Javanese.

Bankok, Siam, American Baptist mission, two presses, (one sent out last autumn,) and a lithographic press; a printing office fifty-two feet by twenty, and a brick store-house for preserving paper from the white ants. Mission of American Board of Commissioners, one press; six or seven hands employed; some Chinese printing done.

Sadiya, Asam, two presses and a printing office.

Maulmein, Burmah, eight presses, (the power press being withdrawn;) brick printing office, an L, each wing seventy-eight feet by fifty-six; a type foundery; founts in Burman, Karen, and Peguan; twenty-five cases of type, a bindery, and twenty-five natives employed.

Tavoy, among the Karens, two presses, a printing office, and founts of type both in the Sgau and Pgwo Karen.

Lodiana, Northern India, two presses; a printing office containing three rooms, each eighteen feet by eleven and a half; founts in Persian, Dey Nagare or Hindui, and English; twelve men and boys engaged in printing and binding.

Allahabad, one press sent out in October last.

Cuttack, Orissa, one Oriya press.

Madras, eight presses and one lithographic press; a type foundery; fifteen founts in Tamul, Teloogoo, and English; an hydraulic press, and a bindery.

Manepy, Ceylon, four presses, printing office of brick fifty-seven feet by thirty; two or three founts of type; a bindery, and about fifty natives employed.

Bombay, four presses, and a type foundery.

Honolulu, Sandwich Islands, four presses, a printing office; thirty natives employed in printing and binding.

Lahainaluna, one press and a printing office.

South Africa, one press, [75,000 publications printed last year by South African Tract Society at Cape Town.]

Cape Palmas, one press.

Beyroot, Syria, one press, and two lithographic presses.

Ooroomiah, Persia, one press.

Smyrna, three presses, a type foundery, four Greek founts, four Armenian, two Hebrew, four English; about 400 cuts, and a bindery.

Syra, Greece, two presses; 1,711,400 pages printed in 1837.

Athens, 616,427 pages printed last year by native presses.

Hamburg, Germany, Baptist mission; native presses, 100,000 tracts circulated last year.

Park Hill, Arkansas, Cherokees, one press.

Shawanoe, Indian station, one press and a printing office.

At the above twenty-three mission printing establishments are fifty-four presses, (and four lithographic presses,) five type founderies, and six large and four small printing offices.

The missions of the American Board of Commissioners printed the last year 665,862 copies, or 29,880,404 pages; the missions of the American Baptist Board, 20,902,400 pages; the mission at Syra, 1,711,400; the mission at Orissa, 1,566,000; and the mission in Northern India, 227,780; making, exclusive of issues by United Brethren, 54,287,984 pages, which is more than the whole number of pages of tracts and volumes printed the last year by the American Tract Society.

The aid of the American Tract Society is also extended to friends in Russia, and the missionaries and tract societies labouring to diffuse evangelical truth in other parts of the continent of Europe, by whom about twenty millions of pages were printed the last year. No less than six hundred publications, issued at all the foreign stations, have been approved by the society's publishing committee, and the society and the several institutions aided, issue tracts in seventy-four different languages.

VOYAGES OF DISCOVERY.

These expeditions are not now confined to England, France, or Russia, but private merchants have entered upon them. The house of Grenut & Co., of Geneva, who carry on a large trade in the whale fishery in the North and South Seas, are fitting out one of their largest whalers for a voyage round the world, without any limitation of time, for the purpose of prosecuting zoological and botanical discoveries. They have made an offer to an eminent naturalist at Geneva, to convey him, without charge, to all places of interest, upon condition of his placing in the museum of that city the collection which he may form. The expense of the voyage is to be defrayed from the private purse of the Baron de Grenut, and his public spirit is much applauded.—*Italian paper.*

THRASHING MACHINE.

A thrashing machine, manufactured by L. Beare, of Meeth, near Hatherleigh, has been lately put to work on a farm in the parish of Landkey, near Barnstaple, when an acre of barley was taken in, and thrashed in eighteen minutes, yielding forty bushels of grain. Many respectable farmers were present, and expressed themselves highly pleased and satisfied with the performance of this surprising machine, as the barley was perfectly fit for seed or malting, every grain being free from damage.

SUGAR FROM THE PUMPKIN.

A complete revolution is expected to take place in the manufacture of native sugar—a revolution which will probably compel the beet-root growers to "hide their diminished heads." In other words, the pumpkin is about to enter the field as a rival of the beet-root, and to force the Chamber of Deputies to revise its late enactment on the sugar question. We hear that an industrious speculator is on the point of establishing a manufactory for extracting sugar from this overgrown and hitherto despised production of the vegetable world, the first experiments on which, it is added, have been crowned with complete success.—*French paper.*

Died, at his residence in Union street, on the morning of sixth day, the 8th instant, Jonathan Evans, of this city, aged 80 years. His long continued and valuable services in the Society of Friends, and the weight and influence of his judgment in the right administration of its concerns, invest the event of his demise with no ordinary degree of interest. Yielding obedience to the visitations of Divine grace at an early period of his life, his naturally clear and vigorous intellect, improved by good literary culture, were brought under the discipline of the cross of Christ, thus preparing him for eminent usefulness in the church. For about half a century he was in the station of elder, and during about the same period he was an efficient member of the Meeting for Sufferings, besides filling at different intervals various other responsible appointments in the service of the Society; and in seasons of difficulty, when the cause of truth was assailed, or seemed in jeopardy, no one was more distinguished for unbending firmness in its defence. He was likewise much and deservedly respected in the community at large, for the stability and uprightness of his character. The writer of this not having the privilege of being present, consequently what follows rests upon information received. His last sickness was of about nine days' continuance. From the commencement it was evident that he deemed his end to be near; his mental faculties appeared to have lost nothing of their wonted clearness. The patience with which he bore the last conflicts of nature, the serenity with which he alluded in several ways to his approaching close, and the peaceful feelings that were witnessed around his bed, gave evidence that his mind was gathered and settled upon the immutable Rock, Christ Jesus, the hope of the saints' glory. One morning, being asked by the physician, his son, how he felt, he replied, "very quiet—very quiet—but very weak." He died as he lived, saying but little of or for himself, and having fought the good fight, and finished his course, and kept the faith, we cannot doubt that he has received the crown laid up for those who love the Lord Jesus in sincerity.

—— at her residence in Rahway, New Jersey, on the 25th of first month, in the 84th year of her age, Sarah Shotwell, a much esteemed member of Rahway and Plainfield Monthly Meeting. For many years she acceptably filled the station of an elder. She firmly maintained the faith to the end, and repeatedly expressed that her trust was placed in her Redeemer, and, we have no doubt, has entered into that rest which is prepared for the righteous.

For "The Friend."

EXPOSITION OF THE FAITH OF FRIENDS.

On the Divinity and Offices of our Lord and Saviour Jesus Christ.

(Continued from p. 400, vol. xi.)

GEORGE FOX, THE YOUNGER.

He wrote the following Confession of Faith, "for the satisfaction of some tender, conscientious persons, who had heard false reports of him:"—

"First, As concerning Jesus Christ, that was supposed to be Joseph the carpenter's son, who, as concerning the flesh, was crucified and put to death at Jerusalem, between two thieves, upon the cross at Mount Calvary: I do believe he was the Son of God; and that that very body that the soldiers pierced, was the very body that was prepared by the Father for Christ, the true Saviour, to come in, to do the will of the Father that sent him: and I do believe that, by the grace of God, he tasted death for every man, that as many as believe in and obey him, whose soul was made an offering for sin, might have eternal life, through him, who gave his precious life for a ransom for many.

"Secondly, I do believe that no man can be justified by the works of the law, nor by any work of his own, but he or she that is justified in the sight of God; it is freely by his grace, through faith in Christ Jesus, who creates such unto good works, which God hath ordained, that they that are justified should walk in."

"Thirdly, Touching the resurrection: it is a mystery which the carnal mind can never comprehend, but they that come to witness a part in the first resurrection, which is Christ Jesus, the Light of Life; they in his light may come to perceive the mystery of the resurrection; but if truth can be received and understood, then it will appear and be manifested to such, that I do not deny the resurrection: for I do verily believe, that the hour is coming, in which all that are in the graves shall hear the voice of the Son of God, and shall come forth; they that have done good unto the resurrection of life, and they that have done evil unto the resurrection of condemnation: but to fools that say that this body of natural flesh and bones shall be raised, I say, that body which is sown, is not that body that shall be; but God giveth a body as it pleaseth him, yet to every seed its own body: now, there is the seed of the serpent, and the seed of Christ; and they that can discern the body of each seed, are not the fools which are questioning how the dead shall be raised, and with what bodies they shall come; for they know all mankind will be found to be one of these seeds, and that every seed shall have its own body.

JOHN WHITEHEAD.

From a treatise entitled "A Manifestation of Truth," I extract the following, viz:—

"Concerning salvation by Christ, we say and believe that without the sufferings and death of Christ at Jerusalem, no man can be saved, justified, or sanctified, and therefore do they maliciously, or, at least, ignorantly, slander us, who say we expect not to be saved by Christ's sufferings at Jerusalem, but by Christ's sufferings in us; for such words did never proceed from us, though we say that it is not an historical knowledge and belief of what Christ said and suffered at Jerusalem, sixteen hundred years ago, that can or doth save any man, without feeling of his Spirit, power, and life made manifest within, to make them conformable to him in his death, and raise them together with him to live in the virtue of his life; by which life, we, as well as the ancient Christians, are saved, and we are sanctified and justified in the name of the Lord Jesus, and by the Spirit of our God, which mightily worketh in us, and all his works are perfect: And, therefore, I do distinguish betwixt the righteousness which is faith, which the Spirit worketh, and the righteousness which is of the law performed by man's own strength; for though the one be as filthy rags, yet so is not the other; therefore is he the enemy of righteousness that mingles them both together, and treads them under foot as dung and dross: Therefore let all that love their souls, love Christ the righteousness of God, and follow after him, that they may be made righteous, and have that boldness in the day of judgment which the ancient Christians had, because, said they, as He is, so are we in this world."—Works, pages 134, 135.—1662.

CATHARINE EVANS AND SARAH CHEEVERS.

In a brief narrative of the sufferings of these Friends in the Inquisition at Malta, in consequence of their religious principles, there is an account of an examination which they underwent relative to their faith. In the course of this, they thus declare their belief in God and in his beloved Son, viz.—

"We do believe in God, and in Jesus Christ, which was born of the virgin Mary and suffered at Jerusalem under Pilate, and arose again from the dead the third day, and ascended to his Father, and shall come to judgment, to judge both quick and dead."—P. 6.—1662.

SAMUEL FISHER.

"And because we make mention of Christ in us, and the righteousness of the law as necessary in order to salvation, to be performed and fulfilled in our own persons, as Paul does, Rom. viii. 4. though we mean no other righteousness than the same that is in Christ, and is wrought in us by no other power than that of Christ, and that same Christ too, of whom the Scriptures speak, that 'to him give all the prophets witness,' Acts x. that in his name and through faith in his name alone, whoever believeth, shall receive remission of sins; than which Christ and his name, there is no other under heaven, given among men, whereby they must be saved; they belie us both to God and men, as denyers of Christ, and of his righteousness, and of justification by Christ alone."—Works, page 34.

JOHN CROOK.

The opposers of Friends having for many years endeavoured to make the impression on the public, that the Society were not believers in the doctrines of the Christian religion; and finding that the declarations of faith repeatedly published by Friends entirely disproved their false accusations, resorted to another slander in order to injure them. They accused them of having changed their faith; asserting, that although the Society, at the close of the seventeenth century, were really sound and scriptural in their belief, yet the *founders* of the sect, the *first* members, held very different doctrines. This charge was strenuously and successfully controverted. Amongst those who wrote in refutation of it, was John Crook. The following is extracted from a declaration of faith which he gave forth in 1663; and reprinted in the year 1698, "in order," says he, "that they may see what myself with our ancient Friends held in the year 1663." Alluding to the unspeakable gift of the Holy Spirit, freely dispensed to all mankind through Jesus Christ our Lord, he says—

"Through this gift we believe, that Christ Jesus, the Son of God, was manifested in the flesh, in the fulness of time. And this we know by the same Spirit, by which our fathers believed he was come, and Abraham saw his day; by the same we do believe he is come, and do see his day; as also by the prophets' and apostles' writings: which twofold cord is not easily broken.

"We believe also, according to the Scriptures of Truth, that this same Jesus hath God highly exalted, and given him a name above every name, that whosoever believes in him, shall not perish, but have everlasting life; and that there is not another name, whereby man can be saved, than this name of Jesus Christ; nor is remission of sins to be preached by any other name. But as we do not believe, that the outward letters and syllables are that name, that are to be bowed unto by the outward knee, no more than the letters and syllables in the words, God or Spirit, seeing the Scripture saith, 'Unto God, who is a Spirit, every knee shall bow,' Isa. xlv. 23. But that name which saves, is the power and arm of God, that brings salvation from sin, and makes every soul that names it to depart from iniquity. This is that name which was preached, and which is preached, through faith in which name remission of sins is obtained; therefore was the outward word Jesus given him, as his outward name; thou shalt call his name Jesus, for he shall save his people from their sins: mark, for he shall save, &c. So that which saves, is the name, which is to be believed in, which is that arm of God that brings salvation, when no eye pities, neither is there any to help; the power of God that then saves, is that grace that comes from the fulness of Christ the Saviour: and without this virtue, Christ and Jesus are but empty names, 1 Cor. xii. 3. 'No man can say that Jesus is the Lord, but by the Holy Ghost.'

"We believe also, that this Jesus died for, or because of sin, and rose again for the justification of those that believe in him, as well as to manifest to all the world, that he was the Son of God, and that he thereby

spoiled principalities and powers, and triumphed over them openly, and led captivity captive in his own person; yet we believe and know, by his grace, in our hearts, that as his name Jesus, without virtue and power, is but an empty word; so his dying, without man's conformity to his death, or being planted in the likeness thereof, or being crucified with Christ, as saith the Scripture, Rom. vi. 2, 3, 4, 5, 6. Gal. ii. 20. will not profit man, as to the salvation of his soul, no more than the naming of his outward name, Jesus, doth at this day make people to depart from iniquity. For we believe, and are sure, that man must die inwardly, as well as Christ died outwardly, and must be put to death in his flesh, as Christ was, in his: for 'he that is in the flesh cannot please God,' Rom. viii. 8. 'neither cease from sin;' but 'he that is dead, is freed from sin,' Rom. vi. 7. And yet man's dying unto sin, and the root and principle of it in himself, is so far from making void Christ's death in his own person, that it establisheth it to all those ends and purposes, for which it was intended of the Father. As the cures which the physician doth, manifest and establish his skill and ability; so doth man's dying unto sin and self, and living unto God, manifest and establish the virtue and power of Christ's death: for as man manifests his being risen with Christ, by his seeking the things that are above, Col. iii. 1, 2. so doth he manifest his knowledge of the death of Christ, by his being crucified with Christ, and bearing about in his body the dying of the Lord Jesus; for as it is not an outward belief, gathered from the letter, that will change the heart and life, though the judgment and opinion it may, so is it not a belief from the history, or letter only, that can give man a saving knowledge of the death of Christ; but he must have the same glory and power of the Father in measure, working in him there, to beget faith in his heart, that he may believe unto salvation from his own filthiness and righteousness, as well as confess with his mouth, Rom. x. and must have that spirit in him, quickening his mortal body, as well as to believe that it was in Christ, 'and raised up him from the dead,' Rom. viii. 11. And this man, whoever he be, bond or free, that thus believes the death of Christ, and its satisfaction to God, as well as its usefulness to man, cannot make it void, nor divide it and its virtue upon the soul that thus knows it: but will say, here is a dying man witnessing the death of Christ, and nevertheless the same man living with Christ, and concluding, if Christ had not died, man must have perished in his sin; this being the way found out by God to recover him: whereby he knows Christ, and him crucified, and what the preaching of the cross of Christ is, which is foolishness to them that perish, but to them that are saved, the wisdom of God, and the power of God, 1 Cor. i. 18.

"By this gift of God in our hearts, we further believe, that Christ Jesus rose again from the dead, according unto the Scriptures, and sits at God's right hand in a glorious body; and we believe that our low estates and humble bodies, shall be made like unto his glorious body, through the working of his mighty power, whereby he is able to subdue all things unto himself; and that this mortal shall put on immortality. For though we believe that Christ Jesus hath lighted every man with his light, whereby man may come to know himself lost and undone, as before is said; yet therefore is not every man saved, though the grace that appears to all men is sufficient in itself; but some have the grace of God bestowed on them in vain, not liking to retain God in their knowledge, though something within them shows them what is good; 'but they reject the counsel of God within, or against themselves, to their own destruction,' Luke vii. 30. (see the margin.) And yet it doth not follow, that the grace is insufficient itself, no more than it follows that Christ's death is insufficient, because he tasted death for every man, and yet every man is not saved. Neither doth regeneration, or the believing in the light of Christ within, make void the death and sufferings of Christ without at Jerusalem, no more than believing the scripture testimony without, concerning Christ's death, makes void the work of regeneration and mortification within; but as the apostle saith in another case, so say I in this, for as the man is not without the woman, neither is the woman without the man in the Lord; even so is not the death and sufferings of Christ without at Jerusalem, to be made void and of none effect by any thing within; neither doth the light within make that of none effect, without, but both in the Lord, answer his will: For though there is, and may be, a knowledge and belief of what Christ did and suffered without the gates, in his own body upon the tree, and yet sin alive in the heart, and the work of regeneration not known; yet it cannot be so, where the light within is believed on and obeyed, so as to have its perfect work in the heart, to regenerate and make all things new, and to be of God; this man can never make void what Christ hath done and suffered without: and yet this new birth, or Christ formed within, and dwelling in the heart by faith, doth not limit or confine Christ to be only within, and not without also, but both within and without, according to the good pleasure of the Father, to reveal and make him known; for, 'He fills all things, and the heaven of heavens cannot contain him,' and yet he is at God's right hand, far above all heavens, in a glorious body.

"And we also believe the resurrection of the just and unjust, the one to salvation, and the other to condemnation, according to the judgment of the great day; and then shall every seed have its own body, according to 1 Cor. xv. 36, 37, 38. which we verily believe: for if the dead arise not, we are, of all men, most miserable. But because we dare not be so foolishly inquisitive, as to say, With what bodies shall they arise? Therefore do some say, We deny both the resurrection of the body of Christ, and of all that shall or will be dead: but this also is false; for 'every man shall be raised in his own order; but Christ the first fruits,' 1 Cor. xv. 23. And we believe they shall be raised with the same bodies, so far as a natural and spiritual, corruptible and incorruptible, terrestrial and celestial, can be the same."—p. 364, &c.—1663.

WILLIAM SMITH.

In his "New Catechism," after illustrating the belief of the Society of Friends in the sufficiency of the grace of God, proposes the following query and answer:—

"Q. But if all these things be done for you by Christ, within you, then what do you believe concerning that great work, which, by the death of Christ, was accomplished on the cross in time past, according to the Scriptures: or doth not this your faith concerning such things done for you, by Christ in you, make void his death upon the cross, and the benefit which is to be received thereby?

Ans. "We believe, that all things which are spoken by the holy prophets and apostles concerning Christ, are true according to the Scriptures: We believe that all the dispensations of God, which are manifested by the Scriptures, are altogether true, and that they were all fulfilled according to the determinate will and council of God: So that our faith concerning Christ in us, and the work which he there worketh for us, doth not [at] all make void any of the dispensations of God, which in times past were revealed unto his holy prophets and apostles, and by them testified in the Scriptures; so that the work which the Father then gave unto the Son to do, we believe that he fulfilled according to the Father's will; and that all things pertaining to life and salvation, were fully and perfectly in him, and that he humbled himself to the death of the cross, and from death did rise again: and we believe that he is the resurrection and the life, and gives eternal life to all that believe in him: but that any do believe in him as he is Christ, who are despisers of his light and life in them, that is not our faith; for as we know him in us, and so have our faith in him; we likewise know the dispensation of God in times past, and the end of their manifestation, and the time of their finishing, and the Scriptures are fulfilled in us, who live in the faith of Christ, and walk in his Spirit: and we also know, and believe, that he is the same Christ in us, which in dispensations past did humble himself to the cross, and doth perfect his work in us, according to the determinate counsel and will of the Father: so that our faith concerning Christ in us, doth not at all make void what he hath done or wrought in times past, but doth fully and perfectly establish it as a true dispensation; and by our faith in Christ, we know in a good understanding, the things that are past, present, and to come; and that Christ is yesterday, to-day, and the same for ever; and of his life, nature and being, there is neither variableness nor changing, but an enduring substance of immortality; who is glorified with the Father, in the same glory that he had with him before the world began; who, through every dispensation, hath manifested his glory; and in this dispensation of his light and life he is come unto us; and we know him to be the First and the Last, the

Beginning and the Ending, for Him hath God the Father sealed; and in Him, our faith stands steadfast."—page 136.—1664.

For "The Friend."

WORSHIP.

The outward form of worship which was appointed by God to the Jews, being come to an end, we find that Jesus Christ, the author of the Christian religion, prescribes no set form of worship to his children under the more pure administration of the new covenant, save that he only tells them, that the worship now to be performed is spiritual and in the spirit. The duties of praying, preaching, &c. are always annexed to the assistance, leadings and motions of God's Spirit. Since then man in his natural state, is thus excluded from acting or moving in things spiritual, how shall he exercise the first and previous duty of waiting upon God, but by silence, and by bringing that natural part to silence? which is no otherwise but by abstaining from his own thoughts and imaginations, and from all the self-workings and motions of his own mind, as well in things materially good, as evil, that he being silent, God may speak in him, and the good seed may arise. This, though hard to the natural man, is so answerable to reason, and even natural experience in other things, that it cannot be denied. If the soul be still thinking and working in its own will, and busily exercised in its own imaginations, though the matters as in themselves may be good concerning God, yet thereby it incapacitates itself from discerning the still, small voice of the Spirit, and so hurts itself greatly. If any should from a sense of sin and fear of punishment, seek to terrify themselves from sin, by multiplying thoughts of death, hell and judgment, and by presenting to their imaginations the happiness and joys of heaven, and also by multiplying prayers and other religious performances; as these things could never deliver them from one iniquity, without the secret and inward power of God's spirit and grace; so would they signify no more than the fig leaves wherewith Adam thought to cover his nakedness. And seeing it is only the product of man's own natural will, proceeding from self-love, and seeking to save himself, and not arising purely from that divine seed of righteousness, which is given of God to all for grace and salvation, it is rejected of God, and no wise acceptable to him; since the natural man, as natural, while he stands in that state, is with all his arts, parts, and actings, reprobated by him. This great duty, then, of waiting upon God must needs be exercised in man's denying self, both inwardly and outwardly, in a still and mere dependence upon God, in abstracting from all the workings, imaginations, and speculations of his own mind, that being emptied, as it were, of himself, and so thoroughly crucified to the natural products thereof, he may be fit to receive the Lord. Man being thus prepared, the little seed of righteousness which God hath planted in his soul, and which Christ hath purchased for him, even the measure of grace and life, which is burdened and crucified by man's natural thoughts and imaginations, receives a place to arise, and becometh a holy birth in man, and is that divine air, in and by which man's soul and spirit comes to be leavened; and by waiting therein, he comes to be accepted in the sight of God, to stand in his presence, hear his voice, and observe the motions of his Holy Spirit. It being man's place to wait in this, we know by blessed experience, the soul is thereby more strengthened, renewed and confirmed in the love of God, and against the power of sin, than any way else: this being a foretaste of that real and sensible enjoyment of God, which the saints in heaven daily possess; which God frequently affords to his children here, for their comfort and encouragement, especially when they are assembled together to wait upon him.

The excellency of this silent waiting upon God doth appear, in that it is impossible for the enemy, the devil, to counterfeit it, so as for any soul to be deceived or deluded by him in the exercise thereof. Now in all other matters he may mix himself in with the natural mind of man, and transforming himself, he may deceive the soul by busying it about things perhaps innocent in themselves, while he keeps them from beholding the pure light of Christ; and so from knowing distinctly his duty and doing it. For that envious spirit of man's eternal happiness, knoweth well how to accommodate himself, and fit his snares, for all the several dispositions and inclinations of men; and that so long as self bears rule, and the Spirit of God is not the principal and chief actor, man is not out of his reach. There is not any exercise whatsoever, wherein he cannot enter, except in this alone: for he can only work in and by the natural man, and his faculties, by secretly acting upon his imaginations and desires, &c.: therefore when the natural man is silent, and the soul, as it were, is brought to nothingness, as to its own workings, then the devil is shut out; for the pure presence of God and the shining of his light he cannot abide. When man comes to be wholly silent, as the pure light of God shines in upon him, then he is sure that the devil is shut out; for beyond the imaginations he cannot go, which we often find by sensible experience.

Indeed he can easily enter and work in a meeting, that is silent only as to words, either by keeping *the minds* of those assembled, in various thoughts and imaginations, or by stupifying them, so as to overwhelm them with a spirit of heaviness and slothfulness: but when we retire out of all, and are turned inward, both by being diligent and watchful upon the one hand, and also silent and abstracted from all our own thoughts upon the other; as we abide in this sure place, we feel ourselves out of his reach. The nature of this worship, which is performed by the operation of the Spirit, the natural man being silent, doth appear from these words of Christ. John, iv. 23, 24. "But the hour cometh, and now is, when the true worshippers shall worship the Father in spirit and in truth: For the Father seeketh such to worship him. God is a spirit, and they that worship him, must worship him in spirit and in truth." Those have but a carnal and gross apprehension of God and of the things of his kingdom, that imagine, that men please him by their own workings and actions. Whereas the first step for a man to fear God, is to cease from his own thoughts and imaginations, and suffer God's spirit to work in him. We must cease to do evil, ere we learn to do well; and this meddling in things spiritual by man's own natural understanding, is one of the most dangerous evils that man is incident to: being that which occasioned our first parents' fall, a forwardness to desire to know things, and meddling with them, both without and contrary to the Lord's command. Our meeting at set times and places is not a part of our worship, but a preparatory accommodation of our outward man, in order to a public visible worship; and we set not about the visible acts of worship, when we meet together, until we be led thereunto by the Spirit of God. He causeth the life more to abound, when his children assemble themselves diligently together to wait upon him, and are inwardly gathered unto it, and to pass from vessel to vessel, that as many candles lighted and put in one place do greatly augment the light, and make it more to shine forth; so when many are gathered together into the same life, there is more of the glory of God, and his power appears to the refreshment of each individual; for he partakes not only of the light and life raised in himself, but in all the rest. Therefore Christ hath particularly promised a blessing to such as assemble together in his name, seeing he will be "in the midst of them." Matt. xviii. 20.

For "The Friend."

HAVERFORD SCHOOL.

This institution was founded by an association of Friends, and opened in the year 1833. Its object is to combine sound and liberal instruction in literature and science, with a religious care over the morals and manners, thus affording to the youth of our Society an opportunity of acquiriug an education equal in all respects to that which can be obtained at colleges, without exposure to those associations, which are apt to lead them away from the simplicity of our religious profession.

The course of study embraces the Greek and Latin Languages, Antiquities, Ancient and Modern Literature, History, Composition, Logic, Rhetoric, Criticism, Mathematics, Natural Philosophy, Chemistry, Botany, Physiology, Intellectual and Moral Philosophy, Political Economy, and the Evidences of Natural and Revealed Religion. This course will occupy a period of four years, and those students who shall complete it, will be entitled to become candidates for the diploma. The students in the Collegiate Department are divided into four Classes, viz., The 3rd Junior, 2nd Junior, Junior and Senior. The candidates for admission into the lowest of these (the 3rd Junior) must sustain an examination in the following studies: English, Latin, and Greek Grammar, Geography,

Algebra as far as Simple Equations, Latin as far as Cæsar, and the Gospel of John in the original Greek. Those pupils who may not have made the required progress in all these studies will enter the Introductory School, in which Reading, Writing, Arithmetic, Geography, Algebra, Grammar, and the Elements of the Greek and Latin languages are taught. The study of the Holy Scriptures is pursued by all the pupils; and they are carefully instructed in the principles and testimonies held by our Religious Society.

There are two terms in the year; the Winter Term of six months, commencing on the second Fourth-day in the Tenth month, and the Summer term of four months commencing on the second Fourth-day in the Fifth month. Examinations will take place at the close of each term. Two vacations, of four weeks each, occnr, one in the Spring and the other in the Autumn; during which time the Students are expected to make all the necessary arrangements for the ensuing term, as no student will be permitted to be temporarily absent, during its continuance, unless on account of the sickness of himself or a near relative, or for other urgent reason.

No student will be admitted unless he be a member of our Religious Society, or the son of a member. Nor will any one be admitted for a period less than one year. All the students will be expected to pursue the regular studies of their class, except that a few young men who wish to qualify themselves for teaching, may, at the discretion of the managers, be admitted although they do not pursue all those studies. Should the number of applicants exceed that of the vacancies, a preference will be given to boys over twelve years of age, to those who enter to complete the full course of study, and to those who are prepared to enter the collegiate department.

Applications for admission must be made to the Secretary of the Board of Managers, and must state explicitly the age of the applicant; that he is a member of the religious Society of Friends, or the son of a member; whether he is qualified to enter one of the classes of the Collegiate or of the introductory Department; and whether he intends to go through the full course of instruction, embracing a period of four years, or to enter for a shorter period. The result of his application will be communicated to the applicant before the close of the term preceding that for which he wishes to enter; and persons thus notified of their admission will be considered responsible for the amount charged for Board and Tuition for that term. Parents intending to remove their sons from the School at the close of the Winter Term, will be required to give notice of such intention to the Superintendent, on or before the first of the Third month, and if at the close of the Summer Term, on or before the first of the Eighth month; and in case of failure to give such notice, their places will be considered as engaged for the term next ensuing, and payment be required accordingly.

The price for Board and Tuition is $250 per annum, payable as follows, viz., $75 at the opening, and $75 at the middle of the Winter Term, and $100 at the opening of the Summer Term. By direction of the Managers,

CHARLES YARNALL, *Secretary.*
No. 39, High street, Philada.

For "The Friend."

HUMILITY.

"So Naaman came with his horses and with his chariot, and stood at the door of the house of Elisha.

"And Elisha sent a messenger unto him, saying, Go and wash in Jordan seven times, and thy flesh shall come again unto thee, and thou shalt be clean."—2 Kings, v. 9, 10.

The Syrian, though he travelled far,
Relief from suffering to ask,
Scorned the great prophet's mild command,
And proudly spurned the easy task;
He deem'd that in all Israel's land
No waters could be found, that ever
Had worth like those he left behind,—
Pharpar's bright stream, Abana's river.

And thus it is; we feel the need
Of a physician to the soul,
And like Naaman, ask of Heaven
What shall be done to make us whole;
But, told what seems a *little* chain,
Formed by long habit, must be broken,
We slight the warning voice, and ask
A *greater* thing, a stronger token.

Oh, let us humbly turn, and prize
The "still small voice," the least command
Given to correct our erring course,
And guide it to a better land.
If called to act the humblest part,
Obedience will secure a blessing;
Though what we ask may be denied,
Ours will be all that's worth possessing.

ELLA.

1st mo. 6th, 1839.

THE FRIEND.

SECOND MONTH, 16, 1839.

We insert to-day a circular issued by the managers of Haverford school, the more general dissemination of which is deemed desirable.

This institution has now been in operation for a period of five years. Experience has, we believe, realised the anticipations of usefulness which were indulged by its friends, while it has enabled those by whom its affairs have been managed so to modify and extend the course of instruction as greatly to add to its value.

The accommodations provided by the managers are so ample, and the arrangements for promoting habits of application so efficient, that the school has thus far been generally and highly valued as a place of instruction for the children of Friends.

It will be seen that the summer session will open on the 8th of fifth month next, but as applications for admission are to be decided upon in the course of next month, it is very desirable that Friends wishing to enter their sons should do so as early as possible. Applications for the winter term, commencing in the tenth month next, will also be received, and as priority of application, will, other things being the same, secure the preference, it will be to the advantage of those wishing to enter in the fall to forward their names early.

The article we have copied from Silliman's Journal of Science and Arts, relative to a remarkable meteor, and on shooting stars in general, appeared to us calculated in a considerable degree to satisfy that natural curiosity which in every one has been more or less incited in regard to those mysterious appearances.

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CITY SURVEYING.

A lad of from 18 to 20 years of age, having a knowledge of geometry and the theory of surveying, being also a good penman, and wishing to obtain a practical understanding of the various parts thereof, including drafting, may hear of a desirable situation by applying at this office.

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The Northern Soup Society, No. 181, Coates street, has been in operation since the commencement of the year, distributing soup to the poor; and from the great number of cases of distress, and high prices of the articles used, their expenses are very heavy. Donations will be gratefully received at the house, during the hours of distribution, from 11 to 1 o'clock; or by

JOHN D. HART, Market near Fifth st.
JACOB M. THOMAS, No. 10, North Front st.
E. LEVICK, No. 240, North Third st.
JOHN CHILDS, No. 452, North Second st.
C. J. SUTER, corner Third and Callowhill.
JOEL CADBURY, No. 33, North Front st.

—

HADDONFIELD BOARDING SCHOOL FOR GIRLS,

Under the care of Amy Estlack and Sister,

Will be vacated from the 13th of fourth month, to the 6th of fifth month, when it will be ready again for the reception of pupils. The course of instruction will embrace the following branches, viz. Orthography, Reading, Writing, Grammar, Composition, History, Botany, Arithmetic, Algebra, Geometry, Geography, Elements of Astronomy, of Natural Philosophy and Chemistry. School books and Stationary will be furnished at moderate prices. Terms 30 dollars per quarter of twelve weeks, payable in advance; washing included. No deduction will be made for absence, except from indisposition. Pupils can be admitted at any time for a quarter or more. Each one is to be furnished with a wash basin and towels; and to have her clothing &c. distinctly marked. The scholars will be expected to attend the religious meetings of the Society of Friends. Those who intend to send pupils at the opening of the school in the fifth month are requested to forward their names early in the fourth month.

Application may be made at the school, or to WILLIAM EVANS, No. 134, South Front Street, THOMAS KITE, No. 32, North Fifth Street, HARKER and SHIVERS, No. 45, Arch Street, Philadelphia; HENRY WARRINGTON, Westfield, JOSEPH B. COOPER, Newton, New Jersey.

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